

**Factors Influencing Professional Well-Being in Orthopaedic Surgeons***Zachery Lynn Hong, BA; Anna Noel Miller, MD**Washington University School of Medicine, Saint Louis, Missouri, UNITED STATES*

**Purpose:** Diminished physician well-being is a serious occupational hazard, often resulting from burnout and reduced professional fulfillment. If unaddressed, important ramifications include depression, substance use disorders, medical errors, and job turnover. We investigated well-being among orthopaedic surgeons to identify factors that influence their professional fulfillment and burnout.

**Methods:** We conducted a cross-sectional study by surveying 331 members of the American Orthopaedic Association. The professional fulfillment and burnout subscales of the Professional Fulfillment Index (PFI) were used to determine the presence of professional fulfillment and burnout, respectively. Logistic regression was used to identify predictors of professional fulfillment and burnout. A standardized questionnaire was also used to compare self-reported medical errors between respondents with varying levels of PFI well-being.

**Results:** 56% of respondents (185/331) were professionally fulfilled. Positive predictors of professional fulfillment included older age (60-69 vs 40-49 years: odds ratio [OR] 2.86,  $P = 0.005$ ; 60-69 vs 50-59 years: OR 2.94,  $P = 0.004$ ; >70 vs 40-49 years: OR 6.25,  $P = 0.001$ ; >70 vs 50-59 years: OR 6.67,  $P = 0.001$ ), male gender (OR 2.34,  $P = 0.048$ ), and having children (OR 2.91,  $P = 0.02$ ). Adjusting for age, gender, and parental status, there was a greater likelihood of professional fulfillment in all other specialties compared with foot/ankle (with the exception of arthroplasty) and in spine compared with general practice (OR 3.51,  $P = 0.04$ ). 33% of respondents (110/331) were burned out. Predictors of burnout included career stage, work hours, and subspecialty. Burnout was more likely during earlier career stages, when number of years in practice were lower ( $\leq 5$  vs 6-10 years: OR 6.65,  $P < 0.001$ ; 6-10 vs 11-15 years: OR 5.57,  $P = 0.004$ ;  $\leq 5$  vs >20 years: OR 3.93,  $P = 0.01$ ). Burnout was more likely when working 41 to 60 hours per week compared to less than 40 (OR 9.91,  $P = 0.002$ ), but paradoxically, it was less likely when working 61 to 80 hours per week compared to 41 to 60 (OR 0.41,  $P = 0.01$ ). Adjusting for work hours and career stage, there was a greater likelihood of burnout in arthroplasty compared with all other specialties except foot/ankle, trauma, and general practice; in trauma compared with sports (OR 3.85,  $P = 0.04$ ); and in general practice compared with oncology (OR 7.14,  $P = 0.04$ ) and sports (OR 5.56,  $P = 0.02$ ). No association between PFI well-being and self-reported medical errors was identified.

**Conclusion:** An orthopaedic surgeon's well-being is influenced by personal and career-related factors, which may be used to guide targeted interventions that maximize professional fulfillment and minimize burnout. With the high rates of surgeon suicide and job turnover among medical professionals, these are critical factors to address.